UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,888	08/20/2003	David Wayne Bonn	248588001US1	6359

25096 7590 06/29/2005

PERKINS COIE LLP
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

EXAMINER	
FLYNN, KIMBERLY D	
ART UNIT	**PAPER NUMBER**
2153	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/644,888	BONN, DAVID WAYNE	
	Examiner	Art Unit	
	Kimberly D. Flynn	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5-12 and 21-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *25-27* is/are allowed.

6)☒ Claim(s) *5-7,10-12,21 and 22* is/are rejected.

7)☒ Claim(s) *8-9 and 23-24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/29*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- Claims 21 and 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter that does not come within the boundaries of being a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."
- In particular, claims 21 and 22 claim non-functional descriptive material on a computer readable medium (memory).

2. To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 5-6, and 10-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5 and 8 of U.S. Patent No. 6,618,755. Although the conflicting claims are not identical, they are not patentably distinct from each other because Instant Application claims 5-6 and 10-11 define an obvious variation of the invention claimed in Patent No. 6,618,755 and as such are unpatentable for obvious-type double patenting.

- Initially it should be noted that--This application is a continuation of Application No. 09/457,442 now Patent No. 6,618,755, having the same Assignee in both applications.
- The following differences are not sufficient to render the claim patentably distinct and therefore a terminal disclaimer is required.

5. The distinction between the Instant Application and Patent No. 6,618,755 are as follows and is represented in bold lettering:

Application No. 10/644,888	Patent No. 6,618,755
Claims 5 and 6:	**Claim 5:**
A method in a data processing system for identifying subnet address ranges for subnets being used in a network, comprising:	A method in a data processing system for identifying subnet address ranges for subnets being used in a network, comprising:
determining a plurality of addresses of hosts in the network;	determining a plurality of addresses of hosts in the network;
accessing a binary tree, the binary tree	accessing a binary tree, the binary tree

having a root node having no parents, parent nodes including the root node each having **a pair of** child nodes, and leaf nodes having no **child** nodes, such that the root node represents the entire range of addresses available in the network, such that each child node in a pair of child nodes represents a distinct half of the range represented by the parent node of the pair of child nodes, and such that each leaf node represents a single network address that is within the address ranges represented by all of the ancestors of the Ieaf node, each determined host address being represented by a leaf node;	having a root node having no parents, parent nodes including the root node each having **two** child nodes, and leaf nodes having no **children** nodes, such that the root node represents the entire range of addresses available in the network, such that each child node in a pair of child nodes represents a distinct half of the range represented by the parent node of the pair of child nodes, and such that each leaf node represents a single network address that is within the address ranges represented by all of the ancestors of the Ieaf node, each determined host address being represented by a leaf node;
traversing the binary tree in preorder to identify candidate nodes such that both child nodes of each candidate node **have** one or more descendant Ieaf nodes representing a determined host address,	traversing the binary tree in preorder to identify candidate nodes such that both child nodes of each candidate node **having** one or more descendant Ieaf nodes representing a determined host address,
testing the address range represented by each visited candidate node to	testing the address range represented by each visited candidate node to

determine whether the address range is a used in **the** network;	determine whether the address range is a used in **a** network by,
Claim 6:	for the two subranges represented by child nodes of the candidate node:
sending one or more packets each from a source address to a destination address, each packet requesting a reply, the source and destination addresses being in different subranges for each packet;	sending one or more packets each from a source address to a destination address, each packet requesting a reply, the source and destination addresses being in different subranges for each packet;
for each packet, determining whether a reply to the packet is sent directly from the destination address back to the source address; and	for each packet, determining whether a reply to the packet is sent directly from the destination address back to the source address; and
if, for a number of packets exceeding a threshold number, a reply to the packet is sent directly from the destination address back to the source address, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network;	if, for a number of packets exceeding a threshold number, a reply to the packet is sent directly from the destination address back to the source address, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network;
Claim 5 cont:	
if testing indicates that a visited	if testing indicates that a visited

candidate node represents an address range that is a subnet address range for a subnet being used in a network, identifying the visited candidate node as a subnet node; and skipping, in the traversal, any candidate nodes that are descendants of an identified subnet node.	candidate node represents an address range that is a subnet address range for a subnet being used in a network, identifying the visited candidate node as a subnet node; and skipping, in the traversal, any candidate nodes that are descendants of an identified subnet node.
Claims 10 and 11: A computer-readable medium whose contents cause a data processing system to identify subnet address ranges for subnets being used in a network by: receiving a plurality of addresses of hosts in the network; accessing a binary tree, the binary tree having a root node having no parents, parent nodes including the root node each having **a pair of** child nodes, and Ieaf nodes having no **child** nodes, such that the root node represents the entire node in a pair of child range of addresses available in the network, such that each child nodes represents	**Claim 8:** A computer-readable medium whose contents cause a data processing system to identify subnet address ranges for subnets being used in a network by: receiving a plurality of addresses of hosts in the network; accessing a binary tree, the binary tree having a root node having no parents, parent nodes including the root node each having **two** child nodes, and Ieaf nodes having no **children** nodes, such that the root node represents the entire node in a pair of child range of addresses available in the network, such that each child nodes represents

a distinct half of the range represented by the parent node of the pair of child nodes, and such that each Ieaf node represents a single network address that is within the address ranges represented by all of the ancestors of the Ieaf node, each received host address being represented by a Ieaf node;	a distinct half of the range represented by the parent node of the pair of child nodes, and such that each Ieaf node represents a single network address that is within the address ranges represented by all of the ancestors of the Ieaf node, each received host address being represented by a Ieaf node;
traversing the binary tree in preorder to identify candidate nodes **such that** both child nodes of each candidate node **have** one or more descendant leaf nodes representing a received host address,	traversing the binary tree in preorder to identify candidate nodes **such that** both child nodes of each candidate node **having** one or more descendant leaf nodes representing a received host address,
testing the address range represented by each candidate traversal visited to determine whether the address range is a subnet address range for a subnet being used in the network;	testing the address range represented by each candidate traversal visited to determine whether the address range is a subnet address range for a subnet being used in the network by,
Claim 11:	for the two subranges represented by the child nodes of the candidate node:
The method wherein testing comprises, for the two subranges represented by the child nodes of the candidate node:	
sending one or more packets each from	sending one or more packets each from

a source address to a destination address, each packet requesting a reply, the source and destination addresses being in different subranges for each packet;	a source address to a destination address, each packet requesting a reply, the source and destination addresses being in different subranges for each packet,
for each packet, determining whether a reply to the packet is sent directly from the destination address back to the source address; and	for each packet, determining whether a reply to the packet is sent directly from the destination address back to the source address; and
if, for a number of packets exceeding a threshold number, a reply to the packet is sent directly from the destination address back to the source address, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network;	if, for a number of packets exceeding a threshold number, a reply to the packet is sent directly from the destination address back to the source address, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network;
Claim 10 cont:	
if testing indicates that a visited candidate node represents an address range that is a subnet address range for a subnet being used in a network, identifying the visited candidate node as a subnet node; and	if testing indicates that a visited candidate node represents an address range that is a subnet address range for a subnet being used in a network, identifying the visited candidate node as a subnet node; and

skipping, in the traversal, any candidate nodes that are descendants of an identified subnet node.	skipping, in the traversal, any candidate nodes that are descendants of an identified subnet node.

4. Claims 7 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6 and 8 of U.S. Patent No. 6,618,755 and are compared in the table below.

- A subset of claims 6 and 8 of Patent No. 6,618,755 contain every element of claims 7 and 12 of the Instant Application and as such anticipate claims 7 and 12 of the instant application.
- The following differences are not sufficient to render the claim patentably distinct and therefore a terminal disclaimer is required.

Application No: 10/644,888 Patent No: 6,618,755

Claim 7:	**Claim 6 subset:**
The method wherein testing comprises, for the two subranges represented by the child nodes of the candidate node: selecting the address within each subrange that is closest to the addresses of the	for the two subranges represented by the child nodes of the candidate node: selecting the address within each subrange that is closest to the addresses of the

other subrange, determining whether the network contains a host responding to either of the selected addresses; and if the network contains a host responding to either of the selected addresses, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network.	other subrange, determining whether the network contains a host responding to either of the selected addresses; and if the network contains a host responding to either of the selected addresses, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network.
Claim 12: The computer-readable medium wherein testing comprises, for the two subranges represented by the child nodes of the candidate node: selecting the address within each subrange that is closest to the addresses of the other subrange, determining whether the network contains a host responding to either of the selected addresses, and if the network contains a host	**Claim 8 subset:** for the two subranges represented by the child nodes of the candidate node: selecting the address within each subrange that is closest to the addresses of the other subrange, determining whether the network contains a host responding to either of the selected addresses, and if the network contains a host

responding to either of the selected addresses, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network.	responding to either of the selected addresses, determining that the candidate node represents an address range that is a subnet address range for a subnet being used in a network.

Status of the claims

6. Claims 5-7, and 10-12 are rejected under the judicially created doctrine of obviousness-type double patenting and would be allowable upon the filing of a terminal disclaimer.

Allowable Subject Matter

7. Claims 8, 9, 23, and 24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 25-27 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly D. Flynn whose telephone number is 571-272-3954. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 703-305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly D Flynn
Examiner
Art Unit 2153

KDF

GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100